## REMARKS

This Application has been carefully reviewed in light of the Final Office Action dated June 11, 2009 (the "*Office Action*"). At the time of the *Office Action*, Claims 1-4, 6, and 9-22 were pending and rejected in the Application. Applicants amend Claims 1 and 3 and cancel Claims 9 and 18-21. Claims 5 and 7-8 were previously canceled. Applicants respectfully submit that no new matter is introduced by these amendments. Applicants request reconsideration and favorable action in this case.

### Allowable Subject Matter

Applicants note that the only rejection of Claim 22 provided in the *Office Action* is based upon 35 U.S.C. § 112. However, Applicants have appropriately amended independent Claim 1 (from which Claim 22 depends) to address the issues identified by the Examiner. Applicants respectfully submit that the rejection of Claim 22 under 35 U.S.C. § 112 should be withdrawn. Accordingly, although the Examiner has not yet indicated the allowability of Claim 22, Applicant assumes that Claim 22 is allowable since the claims have not been rejected with respect to third-party prior art.

### Section 112 Rejections

The Examiner rejects Claims 1-4, 6, and 9-22 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

Specifically, the Examiner states that Claims 1, 3, and 9 recite "a procedure not performed" which is not found in the Specification. In the previous Response submitted on March 16, 2009 ("*Previous Response*"), Applicants traversed the rejection of the claims on this basis. Specifically, Applicants' discussed the test of enablement and pointed to specific portions of the Specification for enabling disclosure of "a procedure not performed," as recited in Applicants' claims. It continues to be Applicants position that the enablement rejection of Applicants' claims is improper.

Applicants again respectfully note that "[t]he test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with the information known in the art without undue experimentation." M.P.E.P. ch. 2164.01 citing *United States v. Teletronics, Inc.*, 857 F.2d 778, 785 (Fed. Cir. 1988). All that is required is that the information contained in the disclosure of an

application must be sufficient to inform those skilled in the relevant art how to both make and use the claimed invention.

Applicants' Specification is replete with discussion of the need for an extensible macro language that allows a user to write "new" macro commands that include "procedures tailored to the specific needs of the users," in accordance with certain embodiments of Applicants' invention. (*See*, for example, *Specification*, Page 4, lines 8-19). Applicants' Specification states that "[t]he extensible macro language is enabled to process the new macro commands by recognizing the new macro commands unknown to the language and associating the new macro commands with procedure calls stored in a registry." (See, *Specification*, Page 4, lines 13-19). As another example, Applicants' *Specification* states that the present invention "also defines a simplistic syntax for the extended macro language for recognizing the new macro commands for what they are without needing to know what functions they perform." (*Specification,* Page 5, lines 1-4). As still another example, Applicants' *Specification* states that the "macro commands not previously defined or undefined in the macro language refer to those macro commands that were not included in the set of commands available in the macro language at the time of release and distribution to the user." (*Specification*, Page 5, lines 9-13). Thus, Applicants' *Specification* makes clear that **new** macro commands refers to **new procedures** and more specifically to new procedures that were not performed by the original macro language. One of ordinary skill in the art would certainly understand from the description that new macro commands that are not defined in the macro language refer to new procedures that were not performed by the macro commands of the original macro language. Accordingly, Applicants' Specification provides sufficient information and detail to enable those skilled in the art to make and use the claimed invention.

In the *Office Action*, the Examiner responds:

> The Specification on pg. 4, lines 8-19 recites "macro language processors" and "macro language processor". The extensible macro language is enabled to process the new command . . . How can this process take place when there are not any macro language processors or a macro language processor mentioned in reference to the drawing figure 1 or shown in drawing figure 1 for performing the processing of the new macro commands? Therefore, the "new procedures" are not interpreted as being capable of being performed which means there were not any new procedures that were not performed by the original macro language.

(*Office Action*, page 11). Thus, the Examiner acknowledges that the claims and the Specification disclose macro language processors. However, the Examiner indicates that because there is no macro processor in the figures, the new procedures are not capable of being performed. Applicants respectfully but explicitly disagree with this statement. Applicants' Claim 1 clearly recited, for example, the step of "using a macro processor to execute the executable code retrieved from the registry to run the extended macro command associated with the new keyword in the macro language expression . . ." However, to advance prosecution of this case and in an earnest attempt to appease the Examiner, Applicants have amended the claim to recite "using a macro handler comprising a macro processor to execute the executable code . . ." Figure 1 depicts a macro handler 110, and Applicants' Specification describes that "[i]n executing the code, the macro handler 110 passes all the parameters found in the macro expression and parsed as parameters, to the executing code." (*Specification*, page 8, line 28 through page 9, line 3). Other portions of the Specification refer to the "macro processor" for executing macro instructions. (*Specification*, page 11, line 3-10). Thus, as used in Applicants' Specification, the terms "macro handler" and "macro processor" are interchangeable. However, in an earnest effort to advance prosecution of this case, Applicants have amended Claim 1 to recite "a macro handler comprising a macro processor." Applicants submit that Claim 3 already recites "a macro handler" but has amended to recite "a macro handler comprising a macro processor." Claim 9 has been cancelled.

For at least these reasons, Applicants respectfully submit that independent Claims 1 and 3 are enabled in compliance with 35 U.S.C. § 112, first paragraph, and requests reconsideration and allowance of independent Claims 1 and 3.

The Examiner also rejects Claims 9-21 because "Claims 9-21 do not have any mention of "computer readable medium encoded with logic" found in Applicants' Specification to perform the steps of Claims 9-21." While Applicants continue to disagree with the Examiner's rejection of Claims 9 and 18-21 on this basis, Applicants have cancelled Claims 9 and 18-21 in an earnest effort to advance this case to allowance.

The Examiner also rejects Claims 1, 3, and 9 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner

Specifically, the Examiner states that "[i]t is vague and unclear in claim 1 what or who is 'maintaining a predefined macro language', 'retrieving from the registry of keywords' and 'executing the executable code.'" (*Office Action*, page 3). In an earnest effort to advance prosecution of these claims, Applicants have amended Claims 1 and 3 to address the issues identified by the Examiner. Claims 1 and 3 clearly recite "maintaining, in a repository, a predefined macro language" and "using a macro handler comprising a macro processor to retrieve from the registry of keywords." Applicants submit that Applicants claims are not indefinite under 35 U.S.C. § 112, second paragraph.

Additionally, the Examiner states in the *Office Action*, that the Examiner "does not find 'a predefined macro language' defined n such a manner as to reasonably determine what Applicants' mean by 'a predefined macro language'." (*Office Action*, page 14). In the previous Response submitted on March 16, 2009 ("*Previous Response*"), Applicants traversed the rejection of the claims on this basis. It continues to be Applicants position that this rejection of Applicants' claims is improper.

Claim 1 recites "maintaining, in a repository, a predefined macro language comprising a plurality of keywords and a plurality of associated commands for execution." Thus, a repository stores a predefined set of keywords and associated commands. Claim 1 further recites that a macro language expression is parsed to identify a new keyword "that is not within the plurality of keywords in the predefined macro language." Thus, the parser identifies a keyword that is not within the set of predefined keywords. "[A]n executable code associated with the new keyword" is then retrieved from a registry of keywords and associated executable codes. The executable code that is retrieved and that is associated with the new keyword is not in the predefined macro language and, thus, corresponds "to a procedure not performed by the execution of the predefined macro language alone." This executable code is then executed without recompiling the macro language and results "in the performance of a procedure not performed by execution of the predefined macro language alone." Thus, Applicants respectfully submit that the claim clearly recites that a new keyword is identified and an executable code is retrieved from a registry. The new keyword is not in the predefined macro language and the execution of code associated with the new

keyword results in the performance of a new procedure that was not performed by the predefined macro language. Applicants respectfully submit that Claim 1 is not indefinite. Claim 3 is not indefinite for analogous reasons.

For at least these reasons, Applicants respectfully request reconsideration and allowance of independent Claims 1, 3, and 9, together with the claims depending upon these claims.

## Section 103 Rejections

The Examiner rejects Claims 1, 2, and 9 under 35 U.S.C. § 103(a) as being unpatentable over Alexander Sakharov, "Macro Processing in High-Level Languages" ("*Sakharov*"). The Examiner rejects Claims 3, 4, 6, and 19-21 under 35 U.S.C. § 103(a) as being *Sakharov*, U.S. Patent No. 5,295,059 issued to Brooks et al. ("*Brooks*"), in view of U.S. Patent No. 4,931,928 issued to Greenfeld ("*Greenfeld*"), and further in view of Douglas McIlroy, "Macro Instruction Extensions of Compiler Languages" ("*McIlroy*") and further in view of U.S. Patent No. 5,737,592 issued to Nguyen et al. ("*Nguyen*"). The Examiner provides no rejection of Claim 22 under 35 U.S.C. § 103(a).

In this Response, Claims 9 and 18-21 have been cancelled. For the reasons discussed below, Applicants' respectfully submit that Claims 1-4, 6, and 11-17 are allowable over the Examiner's proposed combinations.

### A.     Claims 1, 2, and 9 are patentable over *Sakharov*

Independent Claim 1 of the present Application, as amended, recites:

> A method for providing an extensible macro language comprising:
> maintaining, in a repository, a predefined macro language comprising a plurality of keywords and a plurality of associated commands for execution;
> using a parser to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language;
> using a macro handler comprising a macro processor to retrieve, from a registry of keywords and associated executable codes, an executable code associated with the new keyword identified in the macro language expression, the executable code corresponding to a procedure that is not performed by the execution of the predefined macro language alone; and

using the macro handler to execute the executable code retrieved from the registry to run the extended macro command associated with the new keyword in the macro language expression without recompiling the macro language, the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure that is not performed by execution of the predefined macro language alone.

Applicants submit that the particular combination of elements and operations recited in Applicants' Claim 1 is not obvious over *Sakharov*.

    1.    **Sakharov does not disclose "using a parser to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language."**

As a first example, *Sakharov* does not disclose, teach, or suggest "using a parser to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language," as recited in Claim 1. In previous Office Action, the Examiner acknowledged that *Sakharov* does not disclose the recited claim elements. (*Office Action dated December 16, 2008*, page 5). However, the Examiner now relies upon *Sakharov* and upon paragraphs 1-3 of page 65, specifically, for disclosure of the recited claim elements. (*Office Action*, page 4). Applicants respectfully disagree.

*Sakharov* merely discloses that "lex and yacc [are used] to parse and modify the yacc specifications of the source programming language." (*Sakharov*, page 65, paragraph 1). According to *Sakharov*, "[t]he syntax of macro definitions is written in the lex-yacc format" and "macro definitions are parsed and transformed into the form of additional lex and yacc specifications by means of lex and yacc, too." (*Sakharov*, page 65, paragraph 2). Thus, the parser disclosed in *Sakharov* merely discloses parsing macro definitions.

*Sakharov* makes clear that *Sakharov* is limited to a predefined vocabulary. *Sakharov* explicitly discloses that "[m]acro definitions intended for high-level languages should be specific to their respective base languages." (*Sakharov*, page 59, paragraph 4). *Sakharov* further states that "[m]acros which are specific to the respective programming languages can be used as means for extending the languages." (*Sakharov*, page 49, paragraph 5). Thus, while *Sakharov* allows a macro to provide new terminology, the new terminology can only be

translated into the existing base language. Accordingly, *Sakharov* actually teaches away from and, thus, leads away from Applicants' claim element requiring "identif[ing] a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language. Because the parser is limited to the target language described in the grammar of the source code, *Sakharov* does not disclose, teach, or suggest "using a parser to parse a macro language expression to identify a new keyword in the macro language expression **that is not within the plurality of keywords in the predefined macro language**," as recited in Applicants' Claim 1.

> **2.** ***Sakharov*** **does not disclose "using a macro handler comprising a macro processor to retrieve, from a registry of keywords and associated executable codes, an executable code associated with the new keyword identified in the macro language expression, the executable code corresponding to a procedure that is not performed by the execution of the predefined macro language alone."**

As a further example of the deficiencies of *Sakharov*, the cited reference does not disclose, teach, or suggest "using a macro handler comprising a macro processor to retrieve, from a registry of keywords and associated executable codes, an executable code associated with the new keyword identified in the macro language expression, the executable code corresponding to a procedure that is not performed by the execution of the predefined macro language alone," as recited in Claim 1. In previous Office Action, the Examiner acknowledged that *Sakharov* does not disclose the recited claim elements. (*Office Action dated December 16, 2008*, page 5). However, the Examiner now relies upon *Sakharov*, specifically, for disclosure of the recited claim elements. (*Office Action*, page 4). Applicants respectfully disagree.

The mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills,* 916 F.2d 680 (Fed. Cir. 1990). The showing must be clear and particular. *See, e.g., C.R. Bard v. M3 Sys., Inc.,* 48 USPQ.2d 1225, 1232 (Fed. Cir. 1998). Further, it is essential to view the invention as a whole, taking each element into account as well as the advantages, properties, utilities, and results of the invention. *In re Chupp,* 816 F.2d 643, 2 U.S.P.Q.2d 1437 (Fed. Cir. 1987). "A prior art reference must be considered in

its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), *cert denied*, 469 U.S. 851 (1984); M.P.E.P. § 2141.02).

In this case, *Sakharov* explicitly discloses that "[m]acro definitions intended for high-level languages should be specific to their respective base languages." (*Sakharov*, page 59, paragraph 4). *Sakharov* further states that "[m]acros which are specific to the respective programming languages can be used as means for extending the languages." (*Sakharov*, page 49, paragraph 5). Thus, while *Sakharov* allows a macro to provide new terminology, the new terminology can only be translated into the existing base language. Accordingly, *Sakharov* actually teaches away from and, thus, leads away from Applicants' claim element requiring that "the executable code [correspond] to a procedure not performed by the execution of the predefined macro language." As purported motivation for the proposed modification, the Examiner states that "it is well known in the art that the C language itself has a registry of 33 keywords with the keywords being used in the source code and compiling of the macro language." (*Office Action*, page 4). However, providing a registry of keywords that are used in the base source code also teaches away from Applicant's claim element requiring that "the executable code [correspond] to a procedure not performed by the execution of the predefined macro language." Because *Sakharov* teaches away from Applicants' claimed operations, *Sakharov* does not disclose, teach, or suggest "retriev[ing], from the registry of keywords and associated executable codes, an executable code associated with the new keyword identified in the macro language expression, **the executable code corresponding to a procedure not performed by the execution of the predefined macro language alone**," as recited in Applicants' Claim 1.

> **3.** **Sakharov does not disclose a macro handler operable to "using the macro handler to execute the executable code retrieved from the registry to run the extended macro command associated with the new keyword in the macro language expression without recompiling the macro language."**

As another example, *Sakharov* does not disclose, teach, or suggest a macro handler operable to "using the macro handler to execute the executable code retrieved from the registry to run the extended macro command associated with the new keyword in the macro language expression without recompiling the macro language," as recited in Applicants'

Claim 1. In previous Office Action, the Examiner acknowledged that *Sakharov* does not disclose the recited claim elements. (*Office Action dated December 16, 2008*, page 5). However, the Examiner now relies upon *Sakharov* and upon paragraphs 4-9 of page 65, specifically, for disclosure of the recited claim elements. (*Office Action*, page 4). Applicants respectfully disagree.

*Sakharov* discloses that the programming language extensions are performed by preprocessors that turn code into a standard programming language prior to a compiler compiling the code. Specifically, *Sakharov* states:

> Programming language extensions are easily defined with macro definitions. Compilers do not have to be changed to digest languages extended by means of macros. Instead, **preprocessors that turn code in an extended language into code in a standard programming language are built automatically.**

(*Sakharov*, page 65, paragraph 4, emphasis added). Thus, the preprocessor uses the macro definitions to extend the language as a preprocess to the compiler. *Sakharov* further discloses that "[c]ompilers that are invoked after preprocessing report errors in terms of expanded code," and thus further indicates that the preprocessing disclosed in *Sakharov* is performed prior to compiling of the source code. Because *Sakharov* discloses that the language is extended before compiling, Applicants respectfully submit that *Sakharov* does not disclose, teach, or suggest "using the macro handler to execute the executable code retrieved from the registry to run the extended macro command associated with the new keyword in the macro language expression **without recompiling the macro language**," as recited in Applicants' Claim 1.

> 4. *Sakharov* does not disclose "the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure not performed by execution of the predefined macro language alone."

As another example, *Sakharov* does not disclose, teach, or suggest a macro handler operable to "**the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure not performed by execution of the predefined macro language alone**," as recited in Claim 1.

In previous Office Action, the Examiner acknowledged that *Sakharov* does not disclose the recited claim elements. (*Office Action dated December 16, 2008*, pages 5-6). However, the Examiner now relies upon *Sakharov* for disclosure of the recited claim elements. (*Office Action*, page 4). Applicants respectfully disagree.

Instead, *Sakharov* discloses that the programming language extensions are performed by preprocessors that turn code into a standard programming language prior to a compiler compiling the code. Specifically, *Sakharov* states:

> Programming language extensions are easily defined with macro definitions. Compilers do not have to be changed to digest languages extended by means of macros. Instead, **preprocessors that turn code in an extended language into code in a standard programming language are built automatically.**

(*Sakharov*, page 65, paragraph 4, emphasis added). Thus, the preprocessor uses the macro definitions to extend the language as a preprocess to the compiler.

Further, *Sakharov* explicitly discloses that "[m]acro definitions intended for high-level languages should be specific to their respective base languages." (*Sakharov*, page 59, paragraph 4). *Sakharov* states that "[m]acros which are specific to the respective programming languages can be used as means for extending the languages." (*Sakharov*, page 49, paragraph 5). Thus, while *Sakharov* allows a macro to provide new terminology, the new terminology can only be translated into the existing base language. Accordingly, *Sakharov* actually teaches away from Applicants' claim element requiring that "the executable code associated with the new keyword [is] **not included in the predefined macro language** and resulting in the performance of a procedure **not performed by execution of the predefined macro language alone**."

### 5. Conclusion

For at least the reasons discussed above, Applicants respectfully request reconsideration and allowance of independent Claim 1, together with Claim 2 that depends from Claim 1.

B.    Claims 3, 4, 6, and 10-17 are patentable over the proposed *Sakharov--Greenfeld-Nguyen-Brooks-McIlroy* Combination

In response to the Examiner's rejection of Claims 3, 4, 6, and 10-17 under the proposed *Sakharov-Greenfeld-Nguyen-Brooks-McIlroy* combination, Applicants submit that the references, whether considered alone or together, do not disclose, teach, or suggest the combination of elements recited in Applicants' Claims 3, 4, 6, and 10-17.

For example, independent Claim 3 of the present Application recites:

> A system for providing an extensible macro language, comprising:
> a macro handler comprising a macro processor operable to maintain, in a repository, a predefined macro language comprising a plurality of keywords and a plurality of associated commands for execution;
> a parser operable to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language; and
> a registry of keywords and associated executable codes, including one or more keywords and one or more executable codes that are not included in the predefined macro language, each keyword being associated with a respective one of the executable codes, each executable code corresponding to a procedure that is not performed by the execution of the predefined macro language alone,
> wherein the macro handler is further operable to receive the new keyword from the parser, retrieve, from the registry of keywords and associated executable codes, the executable code associated with the new keyword identified within the macro language expression, and execute the retrieved executable code to run the extended macro command associated with the new keyword without recompiling the macro language, the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure that is not performed by execution of the predefined macro language alone.

Applicants submit that the proposed *Sakharov-Greenfeld-Nguyen-Brooks-McIlroy* combination does not disclose, teach, or suggest the particular combination of elements and operations recited in Applicants' Claim 3.

1.    *Sakharov* is not relied upon to reject Claim 3.

Again, Applicants note that although the Examiner states that Claim 3 is rejected over *Sakharov* in view of *Brooks, Greenfeld, McIlroy,* and *Nguyen,* the Examiner identifies no

elements of Claim 3 as actually being disclosed by *Sakharov*. Rather, the Examiner explicitly identifies each claim element recited in Claim 3 as **not** being disclosed in *Sakharov*. (*Office Action*, pages 6-8). However, to the extent that the Examiner intended to rely upon *Sakharov* for disclosure of some or all of the claim elements discussed below, Applicants have demonstrated above that *Sakharov* is deficient with respect to analogous claim elements recited in Claim 1. Accordingly, Applicants refer the Examiner to the discussion relating to Claim 1 for a detailed discussion of the failures of *Sakharov* and submit that these arguments are equally applicable to analogous claim elements recited in Claim 3

> 2.   **The cited references do not disclose "a parser operable to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language."**

As further examples of the deficiencies of the proposed *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combination, the cited references do not disclose, teach, or suggest "a parser operable to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language," as recited in Claim 3. In the *Office Action*, the Examiner acknowledges that *Sakharov* fails to disclose the recited claim elements and instead relies upon *Greenfeld*. (*Office Action*, pages 6-7). Applicants respectfully disagree.

As shown by Applicants in the previous Response submitted on March 16, 2009, *Greenfeld* merely disclose that a parser 42 "takes as input the formal grammar 56 of the target language, and a source code skeleton 60, 62 of each of the programs supporting the lexical scanner 40 and the parser 42." (*Greenfeld*, Column 8, lines 8-13). "The generator 58 then produces the source code for a lexical scanner and a parser tailored to or customized for the particular target language described by the formal grammar 56. That is, the grammar 56 describes legal sentences in the target language and the parser 42 is generated to exactly analyze those sentences." (*Greenfeld*, Column 8, lines 13-19). Thus, although *Greenfeld* discloses a parser, the parser of *Greenfeld* merely operates to provide source code analysis to perform error checking. (*Greenfeld*, Column 8, lines 19-38; see also Abstract). In related disclosure, *Greenfeld* specifically states that "[t]he analysis member operates according to the programming language of the source code as defined by a grammar mechanism." (*Greenfeld*,

Abstract). Accordingly, the parser of *Greenfeld* is limited to the particular target language described in the grammar of the source code. Because the parser is limited to the target language described in the grammar of the source code, *Greenfeld* does not disclose, teach, or suggest "identify a new keyword in the macro language expression **that is not within the plurality of keywords in the predefined macro language**," as recited in Applicants' Claim 3.

In the *Office Action*, the Examiner states:

> The parser is defined as a program that breaks large units of data into smaller, more easily interpreted pieces. *Greenfield's* parser is capable of performing this function. The function would be performed regardless of the type of parser used.

(*Office Action*, page 14). However, Applicants' have not argued that *Greenfield's* parser of *Greenfield* is not capable of breaking large units of data into smaller, more easily interpreted pieces. Rather, it is Applicants' position that the parser of *Greenfield* does not "identify a new keyword in the macro language expression **that is not within the plurality of keywords in the predefined macro language**," as recited in Applicants' Claim 3. Applicants refer to the immediately preceding paragraph for a detailed discussion as to the deficiencies of *Greenfield* with respect to this recited claim language.

To the extent that the Examiner intended to rely on *Sakharov* for disclosure of the recited language, Applicants respectfully submit that the Examiner did not make this clear in the *Office Action* since the Examiner explicitly states that "*Sakharov* failed to disclose "a parser operable to parse a macro language expression to identify a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language." (*Office Action*, page 6). Nevertheless, *Sakharov* also cannot be said to disclose the recited claim elements. *Sakharov* merely discloses the parsing of macro definitions. (*Sakharov*, page 65, paragraphs 1-2). However, *Sakharov* makes clear that *Sakharov* is limited to a predefined vocabulary. *Sakharov* explicitly discloses that "[m]acro definitions intended for high-level languages should be specific to their respective base languages." (*Sakharov*, page 59, paragraph 4). *Sakharov* further states that "[m]acros which are specific to the respective programming languages can be used as means for extending the languages." (*Sakharov*, page 49, paragraph 5). Thus, while *Sakharov* allows a macro to provide new

terminology, the new terminology can only be translated into the existing base language. Accordingly, *Sakharov* actually teaches away from and, thus, leads away from Applicants' claim element requiring "**identify[ing] a new keyword in the macro language expression that is not within the plurality of keywords in the predefined macro language**," as recited in Claim 3.

Accordingly, because the parser of *Greenfeld* is limited to the particular target language described in the grammar of the source code and because the parser of *Sakharov* is limited to a predefined vocabulary, neither reference nor their proposed combination disclose, teach, or suggest "a parser operable to parse a macro language expression to identify a new keyword in the macro language expression **that is not within the plurality of keywords in the predefined macro language**," as recited in Applicants' Claim 3.

   3.     **The cited references do not disclose a macro handler operable to "execute the retrieved executable code to run the extended macro command associated with the new keyword without recompiling the macro language."**

As another example, Applicants respectfully submit that the cited references do not disclose, teach, or suggest a macro handler operable to "execute the retrieved executable code to run the extended macro command associated with the new keyword without recompiling the macro language," as recited in Applicants' Claim 3. In the *Office Action*, the Examiner acknowledges that *Sakharov* fails to disclose the recited claim elements and instead relies upon *Brooks* for disclosure of a macro handler and upon *Nguyen* for disclosure of executing the code to run the extended macro command "without recompiling the macro language." (*Office Action*, pages 7-8). Applicants respectfully disagree.

*Brooks* relates to a "programmable controller 10" that a user programs "via terminal 11 which is a personal computer that executes an editor program for authoring a ladder logic control program." (*Brooks*, Column 6, lines 36-39). As disclosed in *Brooks*, a user programs the ladder logic control program, and an "editor program then converts the ladder diagram into operation codes (opcodes) and operand addresses which can be executed by the processor module 20." (*Brooks*, Column 6, lines 39-46). Applicants respectfully submit that the conversion of the ladder diagram into opcodes is, in fact, analogous to compiling the ladder logic control program. The cited portions of *Brooks* support such a conclusion. For

example, *Brooks* discloses that "[w]hen program development software in the terminal 11 translates the ladder diagram into instructions **for execution by the processor module 20**, a unique operation code (opcode) is assigned to each macro instruction name used in the program." (*Brooks*, Column 8, lines 25-29, emphasis added). Thus, while *Brooks* discloses that a "macro directory 61 is scanned by ladder logic processor 39 to locate the entry for the opcode of the macro instruction" (*Brooks*, Column 9, lines 2-7), the opcode is the product of recompiling or converting the ladder diagram into machine readable code. Accordingly, Applicants respectfully submit that *Brooks* is limited to a system that does require the recompiling of the macro language. *Brooks* does not disclose, teach, or suggest a macro handler operable to "execute the retrieved executable code to run the extended macro command associated with the new keyword **without recompiling the macro language**," as recited in Applicants' Claim 3.

*Nguyen* does not cure the deficiencies of *Sakharov* and *Brooks*. *Nguyen* merely discloses that a "macro language contains directives, which are reserved keywords with a prefix symbol "%" (e.g., % SQL). (*Nguyen*, Column 6, lines 7-8). Thus, *Nguyen* relates to a predefined macro language that includes directives. Because *Nguyen* specifies that the macro language is comprised of "reserved keywords," the keywords are, in fact, predefined prior to compile time. As such, *Nguyen* also does not disclose, teach, or suggest a macro handler operable to "execute the retrieved executable code to run the extended macro command associated with the new keyword **without recompiling the macro language**," as recited in Applicants' Claim 3.

Furthermore, Applicants respectfully submit that these arguments were presented in the Response submitted on March 16, 2009, but have not been responded to in the final *Office Action*. Thus, the Examiner has failed to address Applicants' arguments with respect to *Brook's* and *Nguyen's* failure to disclose, teach, or suggest a macro handler operable to "execute the retrieved executable code to run the extended macro command associated with the new keyword without recompiling the macro language," as recited in Applicants' Claim 3. Rather, in the final *Office Action*, the Examiner merely reproduces (very nearly word-for-word) the Examiner's previous rejection of Applicants' claims.

Section 707.07(f) of the M.P.E.P. requires an Examiner to answer all material traversed by an Applicant. Specifically, that provision states:

Where the applicant traverses any rejection, the examiner should if he or she
repeats the rejection, take note of the applicant's argument and answer the
substance of it.

(M.P.E.P. § 707.07(f)). Because the Examiner has failed to respond to Applicants'
arguments disputing that *Brooks* and *Nguyen*, as relied upon by the Examiner, disclose, teach,
or suggest a macro handler operable to "execute the retrieved executable code to run the
extended macro command associated with the new keyword without recompiling the macro
language," as recited in Applicants' Claim 3, Applicants submit that the *Office Action* is
deficient on its face.

4.     **The cited references do not disclose "the executable code
associated with the new keyword not included in the predefined
macro language and resulting in the performance of a procedure
not performed by execution of the predefined macro language
alone."**

As another example, the proposed *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen*
combination does not disclose, teach, or suggest "the executable code associated with the
new keyword not included in the predefined macro language and resulting in the performance
of a procedure not performed by execution of the predefined macro language alone," as
recited in Claim 3. In the *Office Action*, the Examiner acknowledges that *Sakharov* fails to
disclose the recited claim elements and instead appears to rely upon either of *Brooks* or
*Nguyen* for disclosure of the recited claim elements. (*Office Action*, pages 7-9).

As discussed above, *Brooks* relates to a "programmable controller 10" that a user
programs "via terminal 11 which is a personal computer that executes an editor program for
authoring a ladder logic control program." (*Brooks*, Column 6, lines 36-39). As disclosed in
*Brooks*, a user programs the ladder logic control program, and an "editor program then
converts the ladder diagram into operation codes (opcodes) and operand addresses which can
be executed by the processor module 20." (*Brooks*, Column 6, lines 39-46). Applicants
respectfully submit that the conversion of the ladder diagram into opcodes is, in fact,
analogous to compiling the ladder logic control program and, thus, the ladder logic control
program and opcodes are, in fact, procedures performed by execution of the predefined
macro language alone. For example, *Brooks* discloses that "[w]hen program development
software in the terminal 11 translates the ladder diagram into instructions for execution by the

processor module 20, a unique operation code (opcode) is assigned to each macro instruction name used in the program." (*Brooks*, Column 8, lines 25-29). The cited portion indicates that at the time the application is created (i.e., when the macro commands are written by the user and converted into opcodes), the application includes all possible macros and then assigns opcodes to them. Were a new macro command discovered, there would be no associated opcode assigned to it and, thus, no way to run the macro command. Accordingly, Applicants respectfully submit that *Brooks* is limited to the procedures performed by the predefined macro language. *Brooks* and, thus, the *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combination does not disclose, teach, or suggest "**the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure not performed by execution of the predefined macro language alone**," as recited in Applicants' Claim 3.

*Nguyen* does not cure the deficiencies of *Sakharov* and *Brooks*. *Nguyen* merely discloses that a "macro language contains directives, which are reserved keywords with a prefix symbol "%" (e.g., % SQL). (*Nguyen*, Column 6, lines 7-8). Thus, *Nguyen* relates to a predefined macro language that includes directives. Because *Nguyen* specifies that the macro language is comprised of "reserved keywords," the keywords are, in fact, predefined prior to compile time. As such, *Nguyen* also does not disclose, teach, or suggest "**the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure not performed by execution of the predefined macro language alone**," as recited in Applicants' Claim 3.

Furthermore, Applicants respectfully submit that these arguments were presented in the Response submitted on March 16, 2009, but have not been responded to in the final *Office Action*. Thus, the Examiner has failed to address Applicants' arguments with respect to *Brook's* and *Nguyen's* failure to disclose, teach, or suggest "the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure not performed by execution of the predefined macro language alone," as recited in Applicants' Claim 3. Rather, in the final *Office Action*, the Examiner merely reproduces (very nearly word-for-word) the Examiner's previous rejection of Applicants' claims.

As stated above, Section 707.07(f) of the M.P.E.P. requires an Examiner to answer all material traversed by an Applicant. Because the Examiner has failed to respond to

Applicants' arguments disputing that *Brooks* and *Nguyen*, as relied upon by the Examiner, disclose, teach, or suggest "the executable code associated with the new keyword not included in the predefined macro language and resulting in the performance of a procedure not performed by execution of the predefined macro language alone," as recited in Applicants' Claim 3, Applicants submit that the *Office Action* is deficient on its face.

**5.    The cited references do not disclose "a registry of keywords and associated executable codes that are not included in the predefined macro language . . . each executable code corresponding to a procedure not performed by the execution of the predefined macro language."**

As further examples of the deficiencies of the proposed *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combination, the cited references do not disclose, teach, or suggest "a registry of keywords and associated executable codes that are not included in the predefined macro language . . . each executable code corresponding to a procedure not performed by the execution of the predefined macro language," as recited in Claim 3. In the *Office Action*, Examiner acknowledges that *Sakharov* fails to disclose the recited claim elements and instead relies upon *Nguyen*. (*Office Action*, pages 7-9). Applicants respectfully disagree.

*Nguyen* merely discloses that a "macro language contains directives, which are reserved keywords with a prefix symbol "%" (e.g., % SQL). (*Nguyen*, Column 6, lines 7-8). Thus, *Nguyen* relates to a predefined macro language that includes directives. Thus, to the extent that *Nguyen* discloses a registry of keywords, *Nguyen* specifies that the macro language is comprised of "reserved keywords." *Nguyen* does not at all relate to "a registry of keywords and associated executable codes **that are not included in the predefined macro language**," as recited in Claim 3. Additionally, there is no disclosure in *Nguyen* that "each executable code corresponding to a procedure not performed by the execution of the predefined macro language," as recited in Claim 3.

Furthermore, Applicants respectfully submit that these arguments were presented in the Response submitted on March 16, 2009, but have not been responded to in the final *Office Action*. Thus, the Examiner has failed to address Applicants' arguments with respect to *Nguyen's* failure to disclose, teach, or suggest "a registry of keywords and associated executable codes that are not included in the predefined macro language," as recited in Claim

3. Rather, in the final *Office Action*, the Examiner merely reproduces (very nearly word-for-word) the Examiner's previous rejection of Applicants' claims.

As stated above, Section 707.07(f) of the M.P.E.P. requires an Examiner to answer all material traversed by an Applicant. Because the Examiner has failed to respond to Applicants' arguments disputing that *Brooks* and *Nguyen*, as relied upon by the Examiner, disclose, teach, or suggest "a registry of keywords and associated executable codes that are not included in the predefined macro language," as recited in Claim 3, Applicants submit that the *Office Action* is deficient on its face.

### 6.     Conclusion

For at least the reasons discussed above, Applicants respectfully request reconsideration and allowance of Claim 3, together with Claims 4, 6, and 14-17 that depend on Claim 3.

Claims 10-13 depend on Claim 1. Accordingly, dependent Claims 10-13 are not obvious over the proposed *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combination at least because Claims 10-13 include the limitations of their respective independent claims, which Applicants have shown above to be allowable. Since Claims 10-13 incorporate the limitations of independent Claim 1, Applicants have not provided detailed arguments with respect to Claims 10-13. However, Applicants remain ready to do so if it becomes appropriate. Applicants respectfully request reconsideration and allowance of Claims 10-13.

### C.     The Proposed *Sakharov-Greenfeld-Nguyen-Brooks* and *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* Combinations are Improper as Applied to Applicants' Claims.

Furthermore, Applicants continue to submit that the Examiner has not provided the requisite teaching, suggestion, or motivation, either in the cited references or in the knowledge generally available to one of ordinary skill in the art at the time of Applicant's invention to modify or combine the cited references. The proposed *Sakharov-Greenfeld-Nguyen-Brooks* and *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combinations are improper for at least these reasons.

### 1.    The Legal Standard

The question raised under 35 U.S.C. § 103 is whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art at the time of the invention. Accordingly, even if all elements of a claim are disclosed in various prior art references, which is certainly not the case here as discussed above, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill at the time of the invention would have been prompted to modify the teachings of a reference or combine the teachings of multiple references to arrive at the claimed invention. It is clear based at least on the many distinctions discussed above that the proposed *Sakharov-Greenfeld-Nguyen-Brooks* and *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combinations do not, taken as a whole, suggest the claimed invention, taken as a whole. Applicants respectfully submit that the Examiner has merely pieced together disjointed portions of references, with the benefit of hindsight using Applicants' claims as a blueprint, in an attempt to reconstruct Applicants' claims.

The controlling case law, rules, and guidelines repeatedly warn against using an applicant's disclosure as a blueprint to reconstruct the claimed invention. For example, the M.P.E.P. states, "The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." M.P.E.P. § 2142.

The U.S. Supreme Court's recent decision in *KSR Int'l Co. v. Teleflex, Inc.* reiterated the requirement that Examiners provide an explanation as to why the claimed invention would have been obvious. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727 (2007). The analysis regarding an apparent reason to combine the known elements in the fashion claimed in the patent at issue "should be made explicit." *KSR*, 127 S.Ct. at 1740-41. "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.* at 1741 (internal quotations omitted).

The new examination guidelines issued by the United States Patent and Trademark Office ("PTO") in response to the *KSR* decision further emphasize the importance of an explicit, articulated reason why the claimed invention is obvious. Those guidelines state, in part, that "[t]he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation

of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." *Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57526, 57528-29 (Oct. 10, 2007) (internal citations omitted). The guidelines further describe a number of rationales that, in the PTO's view, can support a finding of obviousness. *Id.* at 57529-34. The guidelines set forth a number of particular findings of fact that must be made and explained by the Examiner to support a finding of obviousness based on one of those rationales. *See id.*

## 2. The Analysis

To maintain the rejections of each of Applicants' claims the Examiner cites disjointed portions of four and, at times, five unrelated references. For example, with respect to independent Claim 3, the Examiner acknowledges that *Sakharov* fails to disclose each element of the claimed invention but relies upon *Brooks* for disclosure of a "macro handler" operable to perform certain claimed operations, *Greenfeld* for disclosure of "a parser" operable to perform certain claimed operations, and *Nguyen* for disclosure of "a registry of keywords and associated executable codes." Applicants respectfully submit that the Examiner's attempt to modify or combine *Sakharov* with *Greenfeld*, *Nguyen*, *Brooks*, and *McIlroy*, appears to constitute the type of impermissible hindsight reconstruction of Applicants' claims, using Applicants' claims as a blueprint, that is specifically prohibited by the M.P.E.P. and governing Federal Circuit cases.[1] Applicants respectfully submit that the Examiner's reliance on disjointed portions of five unrelated references evidences such use of hindsight to reconstruct Applicants' claims.

The mere fact that four, and in some instances five, references must be combined to disclose the claim elements disclosed in a single one of Applicants' claims provides evidence that the overall combination of claim elements claimed by Applicants would not have been obvious to one of ordinary skill in the art at the time of Applicants' invention. Even if *Greenfeld* discloses "a parser" operable to perform Applicants' claimed operations (which

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[1] It is improper for an Examiner to use hindsight having read the Applicant's disclosure to arrive at an obviousness rejection. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). It is improper to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

Applicants do not admit and expressly disputes above), *Nguyen* discloses a "registry of keywords and associated executable codes" (which Applicants do not admit and expressly disputes above), *McIlroy* discloses recognizing one or more tokens in the macro language expression, and *Brooks* discloses "a macro handler" operable to perform Applicants' claimed operations (which Applicants do not admit and expressly disputes above), such a piecemeal rejection of Applicants' claims fail to give credence to each element of Applicants' claims and to the overall combination of features recited in the claims. For these reasons, Applicants submit that a rejection of Claims 3, 4, 6, and 14-17 under the proposed *Sakharov-Greenfeld-Nguyen-Brooks* and *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combinations, in the manner provided by the Examiner, are improper and can only result from the piecing together of disjointed portions of unrelated references to reconstruct Applicants' claims.

Furthermore, Applicants note that in the *Office Action* the Examiner identifies no suggestion or motivation for modifying the teachings of *Sakharov* to include the disclosure of *Greenfeld*. Similarly, the Examiner identifies no suggestion or motivation for modifying the teachings of *Sakharov* to include the disclosures of *Nguyen*. The only motivation for the proposed combinations that is identified by the Examiner relates to a purported motivation for combining the disclosure of *Sakharov* with the disclosure of *Brooks*. The Examiner provides no suggestion or motivation for modifying the teachings of *Sakharov* to include the disclosures of *Greenfeld*, *Nguyen*, and *McIlroy*. Stated differently, the Examiner has provided no evidence of motivation or suggestion that could support a conclusion that one of ordinary skill in the art at the time of Applicants' invention would have been motivated to modify the disclosure of *Sakharov* to include the cited disclosures of *Greenfeld*, *Nguyen*, and *McIlroy*.[2] In other words, the alleged advantage of the system proposed by the Examiner does not provide an explanation as to: (1) why it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention (*without using Applicants' claims as a guide*) to modify the particular techniques disclosed in *Sakharov* with the cited disclosures in *Greenfeld*, *Nguyen*, and *McIlroy*; (2) how one of ordinary skill in the art at the time of Applicants' invention would have actually done so; and (3) how doing so would purportedly

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[2] To the extent that the Examiner continues to rely on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

meet the limitations of Applicants' independent claims. Applicants respectfully submit that the proposed *Sakharov-Greenfeld-Nguyen-Brooks* and *Sakharov-Brooks-Greenfeld-McIlroy-Nguyen* combinations are deficient on its face for at least these reasons.

With regard to the additional disclosure of *Brooks*, the Examiner states:

> It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify in *Sakharov* the teachings of *Brooks* because such a modification is well known in the art and would enhance *Sakharov's* extended keywords with the parser receiving the keyword first, then parsing the expression and the macro handler in response saving the previous contents of the processor registers (keywords) during execution of the main program with the user selecting the functions and submitting the macro command to run the code associated with the keywords with a prefix symbol.

(*Office Action*, page 10). Thus, again, the Examiner has not pointed to any portions of the cited references that would teach, suggest, or motivate one of ordinary skill in the art at the time of invention to incorporate the disclosure of *Sakharov* with the cited disclosure of *Brooks*.[3] The Examiner's speculation that such a modification "is well known in the art" does not meet the standard required for an obvious combination of references. The Examiner's bald assertion that it is well known in the art and the Examiner's assertion that such a modification would enhance *Sakharov's* extended words does not provide an explanation as to: (1) why it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention (*without using Applicants' claims as a guide*) to modify the particular techniques disclosed in *Sakharov* with the cited disclosure in *Brooks*; (2) how one of ordinary skill in the art at the time of Applicants' invention would have actually done so; and (3) how doing so would purportedly meet the limitations of Applicants' independent claims. Indeed, if it were sufficient for Examiners to merely point to an advantage purported to be "well known in the art" and conclude that it would have been obvious to combine of modify that reference with other references simply based on that advantage (which, as should be evident from the case law discussed above, it certainly is not), then virtually any two or

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[3] To the extent that the Examiner continues to rely on "common knowledge" or "well known" art in support of his rationale for combining the references, the Examiner is requested to produce a reference in support of his position pursuant to M.P.E.P. § 2144.03. If the Examiner is relying on personal knowledge to supply the required motivation or suggestion to combine, Applicants respectfully request that the Examiner produce an affidavit supporting such facts pursuant to M.P.E.P. § 2144.03.

more references would be combinable. Of course, as the Federal Circuit has made clear and as discussed above, that is not the law.

For at least these reasons, Applicants respectfully request reconsideration and allowance of Claims 3, 4, 6, and 10-17.

**Failure to Establish Prima Facie Rejection**

Applicants submit that the above indicated errors in failing to establish a *prima facie* case are clear errors of law as defined by the Official Gazette Notice of July 12, 2005, establishing the procedure for the Pre-Appeal Brief Request for Review, and if maintained, would clearly be overturned by a Pre-Appeal Panel.

**No Waiver**

Additionally, Applicants have merely discussed example distinctions from the references cited by the Examiner. Other distinctions may exist, and Applicants reserve the right to discuss these additional distinctions in a later Response or on Appeal, if appropriate. By not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner's additional statements. The example distinctions discussed by Applicants are sufficient to overcome the Examiner's rejections.
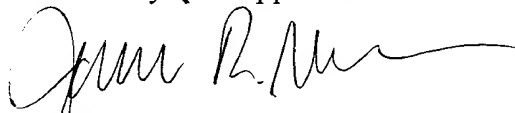
## CONCLUSION

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other apparent reasons, Applicants respectfully request full allowance of all pending Claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

Applicants believe no fee is due. However, should there be a fee discrepancy, the Commissioner is hereby authorized to charge any required fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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